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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,529	03/15/2001	William A. Spalding	194-26331-US	4526

23770 7590 01/16/2003

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EXAMINER

METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 01/16/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/809,529

Applicant(s)

SPALDING, WILLIAM A. P40

Examiner

Daniel S. Metzmaier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11-13,15,16,18-76 and 82-143 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-13,15,16,18-76 and 82-143 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1, 3-9, 11-13, 15-16, 18-76 and 82-143 are pending. Claims 1, 4, 9, 15, 18, 21, 34, 41, 55 and 63 were amended; claims 2, 10, 14, 17 and 77-81 canceled and 92-143 added by the amendment filed October 31, 2002, Paper No. 9. Claims have been withdrawn as directed to a non-elected invention.

Election/Restrictions

1. This application contains claims drawn to an invention nonelected with traverse in Paper No. 7. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: an inconsistency appears in at least two of the papers of record regarding the spelling of applicant's first name (William). The spelling should be checked and either a new executed declaration provided or confirmation that the spelling in the originally filed declaration is correct.

Information Disclosure Statement

3. The information disclosure statement filed October 31, 2002 fails to comply with 37 CFR 1.97(c) because it lacks a statement as specified in 37 CFR 1.97(e) or it lacks the fee set forth in 37 CFR 1.17(p). The IDS fails provide an abstract date of Reference BK, which is for WO 00/09856. Applicants do provide the date of the reference WO

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00/09856 publication from an improperly cited internet database. Please see MPEP 707.05(e).

The Derwent Abstract has been included with this action. Please see the Form PTO-892. Please note the date of publication is the Derwent Week and not the date of the WO publication.

Claim Objections

4. Claims 3, 25, 42, 60, 93, 95 and 104 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 3 limits the claim 1 "said solubilizing surfactant" to a nonionic surfactant. Applicant's amendment now defines "said solubilizing surfactant" as a polyether, which is a nonionic surfactant. Claim 3 is not further limiting thereof.

Claim 25 is dependent on claim 24, which is dependent on claim 21. Claim 25 limits "R⁶" and "x" to the same limitations recited in independent claim 21.

Claim 42 is not further limiting.

Claim 60 is not further limiting.

Claim 93 list nonionic demulsifiers as said ionic surfactant. Said claim is broader than claim 1.

Claim 95 list solubilizing surfactants including tall oil ethoxyethylate having from about 6 to 15 moles of ethylene oxide, ethoxylated nonylphenols, phosphated fatty

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alcohol ethoxylates, such as phosphated oleyl or tridecyl ether having from about 2 to about 10 moles of ethoxylation. Said claim is broader than claim 1.

Claim 104 is not further limiting.

Claim 127, which indirectly depends from claim 107 is broader than 107 in at least R⁶. Applicant should review all elements of said claim for drafting in accordance with 37 CFR 1.75(c).

Claims 128 and 131, which indirectly depend from claim 108 is broader than 108 in at least the HLB limitation. Applicant should review all elements of said claim for drafting in accordance with 37 CFR 1.75(c).

Applicant's numerous claims (134) include numerous issues wherein dependent claims are not further limiting as exemplified by the specific claims above including newly submitted claims. Applicant should review all the claims and remove all occurrences of said issue.

Double Patenting

5. Claims 1, 3-9, 11-13, 15-16, 18-76 and 82-143 are objected to under 37 CFR 1.75 as containing numerous occurrences of substantial duplicate claims too numerous to detail. Specific examples include claim 7 as being a substantial duplicate of 5 (claim 7 is dependent on claim 3, which is not further limiting of claim 1); claim 94 is a duplicate of claim 93 from which it depends. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim 47 is a duplicate of claim 9. The terms demulsifier and ionic surfactant are used synonymously in claims 47 (41) and 9.

Applicants are required to review the numerous claims (134) to remove each occurrence of duplicate claims that exist. Applicant may claim their invention by plural claiming (restating their claimed invention) in a reasonable number of ways provided said claims meet 37 CFR 1.75(b), "More than one claim may be presented provided they differ substantially from each other and are not unduly multiplied".

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 3-9, 11-13, 15-16, 18-76 and 82-143, all claims pending are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 11 are dependent on canceled claim 2. It is unclear what is the subject matter applicant's intend.

Claim 24 is indefinite because "x" is defined as 2 to 20 in claim 21 and "x" is defined as 1-30 in claim 24. It is unclear what is the scope of "x" in claim 24.

Claims 32, 67, 68, and 102 are dependent on canceled claim 14. It is unclear what is the subject matter applicant's intend.

In claim 92, it is unclear what applicant intends by "other water soluble propylene glycol ethers". It is unclear what "other" modifies or with what said ethers are etherified.

In claims 93, 110 and 111, it is unclear what applicant intends since several of the species are nonionic polymers and would not be considered ionic surfactants. An example is "unreacted oxyalkylated phenolic resins", "oxyalkylated amines", etc..

In claim 95, it is unclear what applicant intends since several of the species would not be considered the solubilizing surfactants defined in claim 1. An example is "tall oil ethoxyethylate having from about 6 to 15 moles of ethylene oxide" among others.

In claims 95 and 112-115; the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claims 1, 3-9, 11-13, 15-16, 18-23, 31-76, 82-105, 107, 117, 122, 127, 130, 133, 134, 139 and 141 fail to properly define the structure of the solubilizing nonionic surfactants. More specifically, it is unclear what the compounds are since the structure has not been completely defined, including a definition for R⁷ and R⁸.

Claims 4, 12, 13 and 101 are indefinite regarding the scope of the claim since it is unclear what is the scope of the claims. The "second solubilizing quantity of a mutually organic solvent consisting essentially of . . . " is not deemed to limit the scope of the claim wherein the compositions are open to further ingredients by the transitional language comprising.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3-9, 11-13, 15-16, 18-62, 65-81 and 92-143 are rejected under 35 U.S.C. 103(a) as being unpatentable over Juprasert et al., US 5,942,469, in view of **McCutcheon's Volume 1: Emulsifiers & Detergents North American Edition 1993** (McCutcheon Division, MC Publishing Co., Glen Rock NJ, USA, copyright 1993) pages 27 and 86, 01-1994; and Mokadam, US 5,797,456, and Gardner et al., 5,008,026. Juprasert et al (claims, columns 6 to 8, column 11, line 59 to column 12, line 6; and examples) discloses compositions comprising a defoaming agent, a demulsifying agent and stabilizing agents. The demulsifiers may be anionic and/or nonionic and the stabilizers include glycols and glycol ethers. The compositions are added to oil-brine-gas systems to defoam and break the emulsions. The functional language is implicit to formulating a composition effective to defoam and de-emulsify as disclosed. Juprasert et al (column 5, line 16) teaches the use of water or brine.

Juprasert et al differs from the claims in an explicit disclosure of the claimed demulsifiers, the particular combinations of agents and the concentrations set forth in dependent claims.

Juprasert et al exemplifies the use of Pluronic® surfactants (polyether copolymers) in combination with a solvent, propylene glycol, and Pluronic® surfactants with Igepal® surfactants. Juprasert et al (column 7, line 56, and column 8, lines 3-12) discloses ethoxylated alcohols and mixtures of surfactants, one having an HLB of less than 10 and the other having an HLB of greater than 12. Juprasert et al exemplifies the use of two surfactants having an HLB of 8 and 12.

McCutcheon's (pages 27 and 86) discloses commonly known surfactants designated commercially as Igepal® surfactants and Brij® surfactants. McCutcheon's discloses numerous surfactants as examples of ethoxylated alcohols having the required HLB specified and contemplated in the in the Juprasert et al reference and corresponding to the exemplified materials.

Juprasert et al (column 2, lines 22 et seq and claims) discloses compositions comprising a defoaming agent, a demulsifying agent and a stabilizing agent to stabilize the concentrate as an emulsion. Juprasert et al (column 4, lines 16-28) discloses:

"the wellbore treatment concentrate is an aqueous mixture comprising (1) about 1 to about 20%, more preferably about 0.5 to about 5%, and most preferably about 0.5 to about 2% of said defoaming agent, (2) about 1 to about 10%, more preferably about 2 to about 8%, and most preferably about 3 to about 6% of said demulsifying agent, (3) about 1 to about 15%, more preferably about 5 to about 14%, and most preferably about 8 to about 12%, of said emulsifying agent, when present and, (4) up to about 20%, more preferably about 0.1% to about 15%, and most preferably about 1 to about 15% of said stabilizing agent, when present. All percentages herein are on a weight basis unless noted otherwise."

Juprasert et al (column 4, lines 38-53) discloses:

"(1) the demulsifying agent comprises one or more (preferably 1 to 3) first surface active agents wherein each first surface active agent independently comprises from about 0.5 to about 10%, more preferably about 1 to about 5%, and most preferably about 1 to about 3% of the concentrate, (2) the emulsifying agent, when present, comprises one or more (preferably 2 to 3) second surface active agents wherein each second surface active agent independently comprises from about 0.5 to about 12%, more preferably about 5 to about 12%, and most preferably about 8 to about 12% of the concentrate, and (3) the stabilizing agent, when present, comprises one or more (preferably 1 to 3) stabilizers wherein each stabilizer independently comprises from about 0.1 to about 16%, more preferably about 0.5 to about 16%, and most preferably about 1 to about 15% of the concentrate."

Juprasert et al (column 7, lines 50 et seq) discloses emulsifying agents including ethoxylated alcohols column 7, line 56). Juprasert et al (column 4, lines 38-53) discloses the emulsifying combination preferably is a combination of different HLB emulsifiers having HLB values centers around 10 and 12. The HLB value of the combination is art known to be the sum of the partial HLB values, eg., (50% *HLB 9 + 50% HLB 13 = HLB 11). Juprasert et al (column 6, line 1 to column 7, line 50) discloses demulsifying surfactants including alkyl benzene sulfonates (column 7, lines 47). Juprasert et al (column 8, lines 24 et seq) discloses stabilizers that include glycols and polyglycol ethers. Said stabilizers read on mutual solvents. Juprasert et al (column 11, line 59 to column 12, line 6) discloses the concentrates may be used by itself or combined with solvent pretreatment employing solvents including glycols and glycol ethers. Said glycol ethers read on the instant mutual solvents.

Mokadam (abstract and column 4, lines 47 et seq) discloses antisludge and demulsifying compositions. Mokadam (column 1, lines 27 et seq) characterizes the formation of sludge as a results of emulsion formation associated with high viscosity. Mokadam (column 4, lines 47 et seq) discloses a commercial antisludge composition comprising water based dodecyl benzene sulfonic acid, nonionic surfactant, alcohol and dispersant.

Gardner et al teaches well treating compositions. Gardner et al (column 4, lines 23 et seq) teaches the addition of a mutual solvent to make otherwise insoluble chemicals soluble in the aqueous phase. Gardner et al employs ethoxylated alcohols and cosolvents overlapping those disclosed in the Juprasert et al reference.

These references are combinable because they teach oil well treatment compositions. It would have been obvious to one of ordinary skilled in the art at the time of applicants invention to employ a dodecyl benzene sulfonate, nonionic surfactant and a glycolether solvent as an obvious combination closely related to the conventional commercial products employed as antisludge compositions with demulsification properties as disclosed in the Mokadam reference. The use of the particular isopropylamine dodecyl benzene sulfonate is an obvious commercially available dodecyl benzene sulfonate salt.

Variation of the concentration would have been obvious to one of ordinary skilled in the art at the time of applicants' invention in view of the Juprasert et al disclosed concentrations and the use of the disclosed concentrates with solvent pre-treatments clearly disclosed in the Juprasert et al reference.

These references are combinable because they teach surfactant compositions and a common source reference listing commercially available surfactants and their structure and properties. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ an ethoxylated alcohol such as the Brij® ethoxylated alcohols as a functional equivalent to the ethoxylated nonylphenols exemplified in the Juprasert et al reference and both broadly taught in the Juprasert et al reference.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ an mutual solvent for the advantages taught in the

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Gardner et al reference of improving solubilization of the insoluble nonionic surfactants used in the Juprasert et al reference.

Response to Arguments

2. Applicant's arguments filed October 31, 2002 have been fully considered but they are not persuasive.
3. The WO 00/09856 is cited in the Form PTO-892 attached.
4. The examiner notes applicant's remarks regarding the duplicate claims 1 and 4 are noted. There are other occurrences in the remaining 134 claims where a difference is not readily apparent. Some examples are set forth in the objection above. Applicants should review all the claims and remove all duplicate claims.
5. Applicant's arguments regarding the anticipation rejection over Juprasert et al has been withdrawn. It is noted that not all of applicants 134 claims recite the second solubilizing mutual solvent recited in applicants arguments at page 29 of the response.
6. Applicant asserts (page 35 of the response) the examiner has not pointed out any teaching or suggestion of the use of anionic surfactants, as required by the claims, as opposed to nonionic surfactants. Initially, not all the claims require an anionic surfactant. Several of the 134 remaining claims require a demulsifier or an ionic demulsifier and are not specific to an anionic demulsifier.

Secondly, the Juprasert et al reference (column 3, lines 30-41, particularly lines 35-39) teaches an oil-brine-gas system and a demulsifying agent comprising a first surface active agent selected from the group consisting of a first nonionic surface active agents, a first anionic surface active agents and mixtures thereof. The Juprasert et al

reference explicitly teaches the combination of an anionic surfactant, nonionic surfactant and stabilizing solvent as an embodiment contemplated by patentees.

7. Applicants assert the Juprasert et al reference teaches solvent pretreatment which is not the addition of the solvent to the composition. This has not been deemed persuasive since the Juprasert et al reference teaches (column 8, line 24) alcohol stabilizers including polyethers. Mokadam further teaches alkylbenzene sulfonates stabilized with nonionic ethoxylates and lower alcohols as conventional demulsifier/antisludge agents.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on (703) 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM
January 13, 2003